Maryland Sea Grant Program 2011 NSGO Review

Dorn Carlson

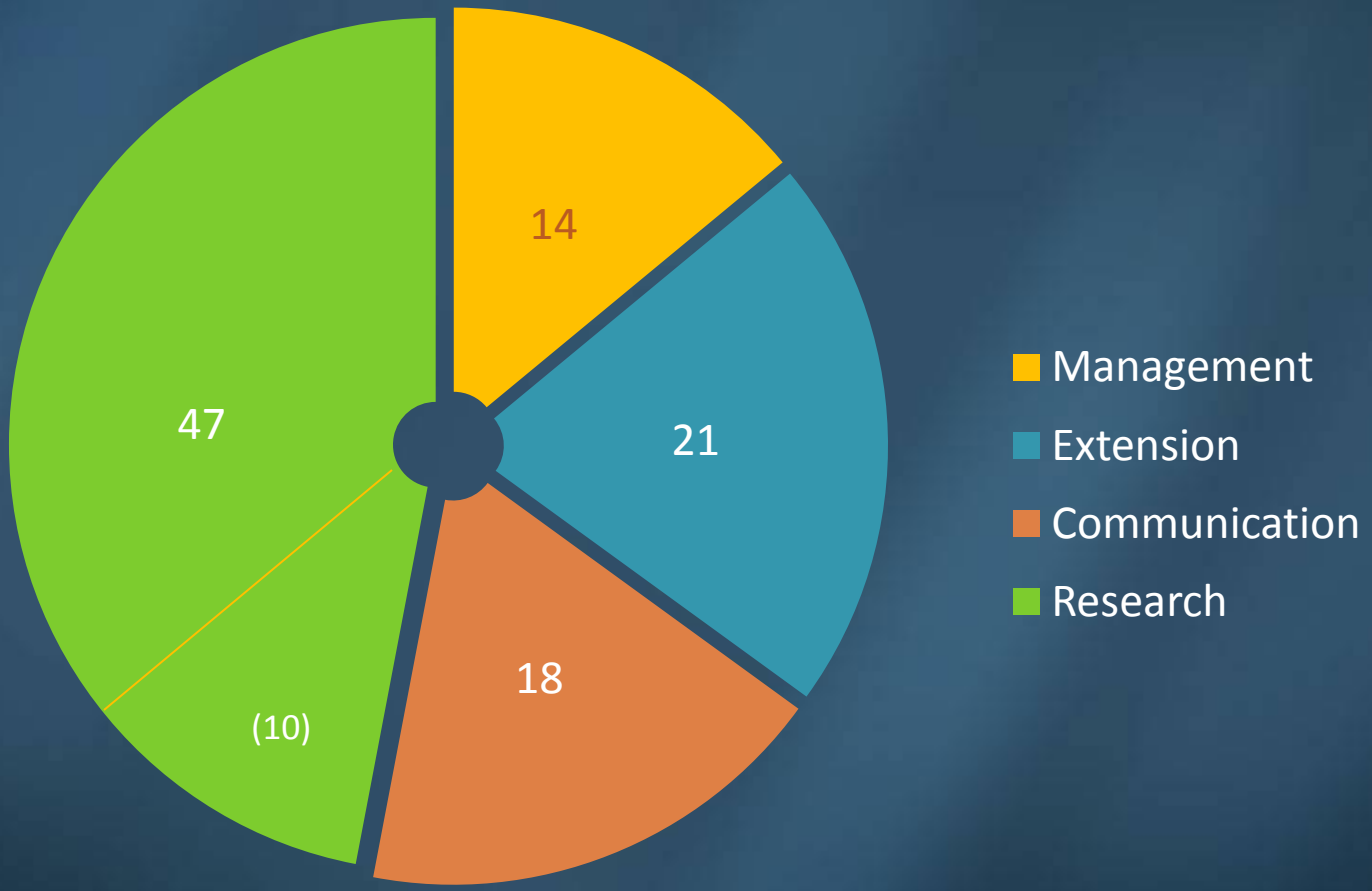
Program Management

Director – Jon Kramer
AD for Research – Fredrika Moser
AD for Admin – Bonny Marcelino
AD for Communication – *vacant*
Extension Coordinator – Doug Lipton

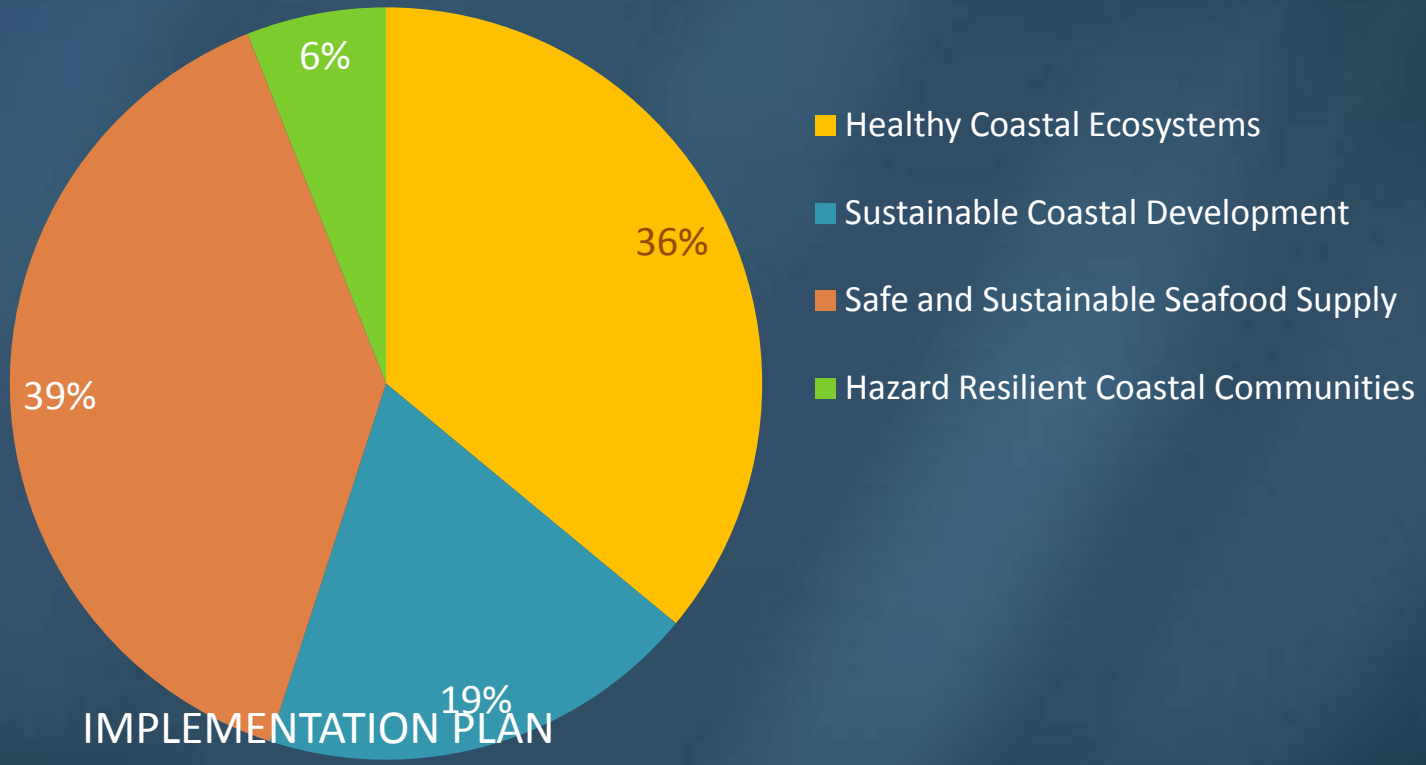
	# of Individuals	FTEs (SG)	FTEs (match and leverage)
Management	8	2	5
Communications	7	3	2
Extension	18	4	10
Education	1	0	1
Research	41	5	4

- Maryland is a “medium” size Program

Program Budget towards each Functional Area



Program Budget towards each Focus Area



Significant Program Changes (since Jan. 2010)

- Changes in Communications Program
  - Retirement in October 2010 of Assistant Director for Communications Jack Greer (national search currently underway)

Program Requested Changes to 2010-2013 Program Plan

- Maryland re-wrote its performance measures to match the national performance measures
- MDSG 2011-2013 Strategic Plan remains the same.
- Maryland received Invasive Species and Aquaculture NSI awards in 2010
- Other than the NSIs, no changes in planned inputs or outputs of the Program expected to be reflected in new Plan.

State Program Performance Measures

- MDSG are now aligned with all national performance measures
- MDSG has one state program performance measure:
  - Number of teachers, students and life-long learners that benefit from Maryland Sea Grant research, communication, extension and education activities, tools and materials (MD-PM1)

Contribution to National Performance Measures and Metrics

- Leveraged Funds $2.05M

  (Non-Match State Appropriations, NSF, EPA, MD-DNR and other grants and contracts to MDSG and MDSG Extension)

- Graduate/Undergraduate Students: 23
- K-12 Students: 26,000
- HACCP Certifications: 80
- Acres Restored: 380

Contribution to National Performance Measures and Metrics

Tools, Technologies or Information Services Developed

- *HAB Predictive Capacity*: Real time prediction of Harmful Algal Blooms for species such as *K. veneficum* that prey on *cryptophytes*. Tool contributes to the MD DNR Harmful Algal Bloom monitoring system.

- *Essential Fish Habitat Model*: White perch EFH model utilizing bioenergetic relationships, biogeochemistry and physical oceanography was developed and used with NOAA project: Modeling Hypoxia and Ecological Responses to Climate and Nutrients. Results have been shared with the Chesapeake Bay Program to aid in targeting regions in Chesapeake Bay for habitat conservation measures.

Program Impacts

MDSG Focus Area 2. Sustainable Natural Resources of Coastal MD (SSSS)

Goal 2.2 Implement EBFM in Chesapeake Bay

- MDSG (Doug Lipton) designed a crab license buy back program to help rebuild Chesapeake Bay blue crab stock. MD DNR bought back 565 commercial crab licenses ($2,260/ license).

- Together, MD and VA bought back 924 commercial crab licenses reducing effort and helping restore Chesapeake Bay blue crab populations.

Program Impacts

MDSG Focus Area 3. Viable Coastal Communities and Economies (SCD)

Goal 3.1 Develop Tools for Improved Coastal Management

MDSG Regional Watershed Restoration Specialists (MD CZM Funded) assisted local governments, counties and watershed organizations to implement restoration projects.

- Assisted communities in receiving funding from the Chesapeake and Atlantic Bays Trust fund for projects.
- Increased the number of BMPs implemented to reduce nutrient and sediment pollution into Chesapeake Bay and tributaries
- Helped stakeholders install dozens of rain gardens and build effective outreach programs.

Program Impacts

MDSG Focus Area 3. Viable Coastal Communities and Economies (SCD)

Goal 3.4 Build knowledge, research, and stewardship capacity in coastal communities

Strategy 3.4c: Develop K-12 STEM content and research experiences for K-12 teachers in coastal issues.

At MD Dept Educ.'s request, MDSG provided a direct pipeline for university research to enter the classroom, and train teachers to use online lessons developed by Sea Grant Extension educators.

- A minimum of 7,000 students were reached statewide.
- 110 teachers made presentations about the Eastern Oyster resource and classroom methods.
- Teachers provided workshop for other science teachers and administrators, expanded program in their own school to other classrooms, and presenting their results in a formal conference setting.

2009 Research Accomplishments

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- *SAV Clonal Depository Developed With Associated Microsatellite Library:* ~200 genotypes of *Vallisneria americana* (eel grass) were cloned and archived.
  - The repository and information on responses of different genotypes to environmental conditions can be used by managers to select those that will be most successful in specific conditions.

- Research quantified the potential of stream restoration efforts to reduce nitrogen loads in rapidly urbanizing watersheds.
  - Findings support ongoing restoration efforts of federal and state and local agencies regarding stream restoration and nitrogen removal.